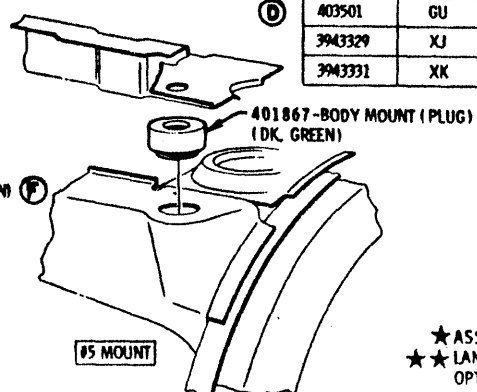
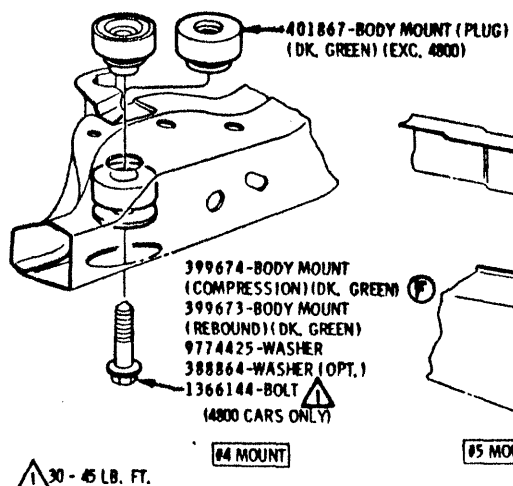
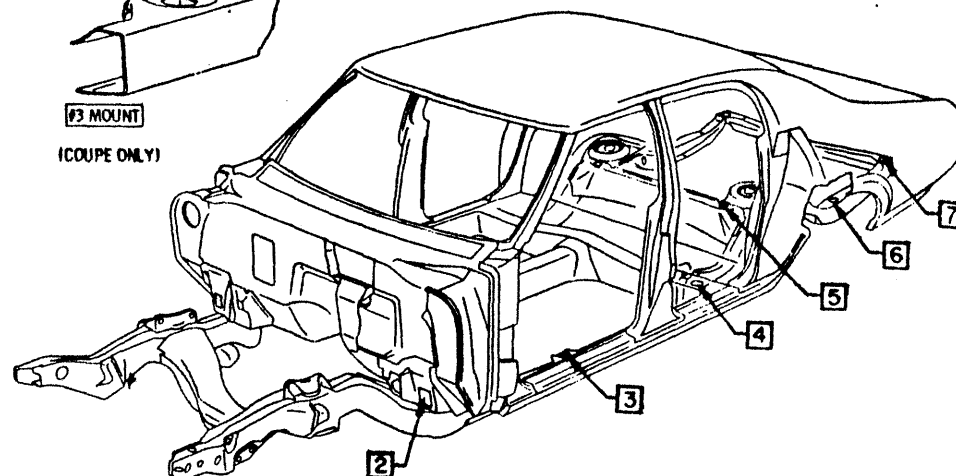
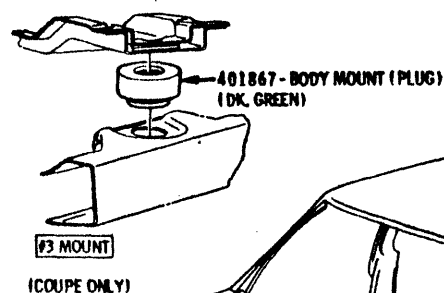
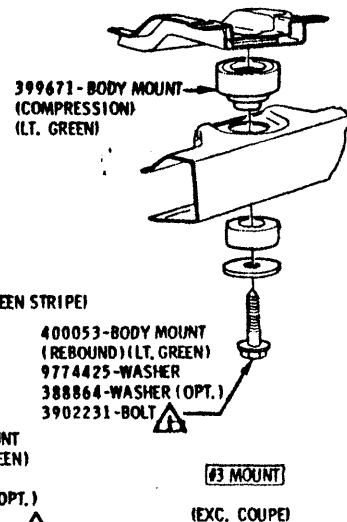


## **SECTION 2 BODY MOUNTING**

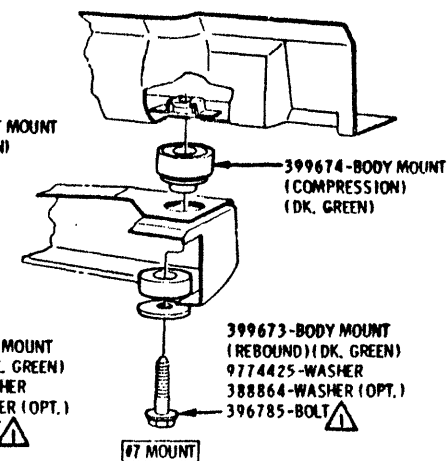
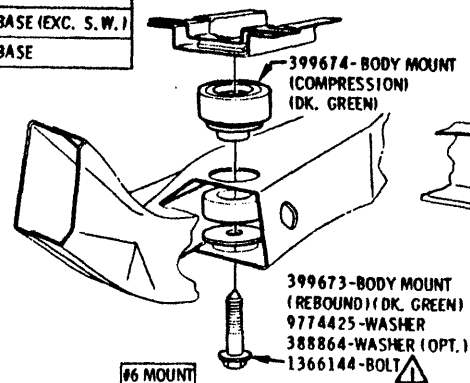
### **110 BODY MOUNTING AND FRAME CHART**

**GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN**

**2. CARROLL, W. C. 1970.**



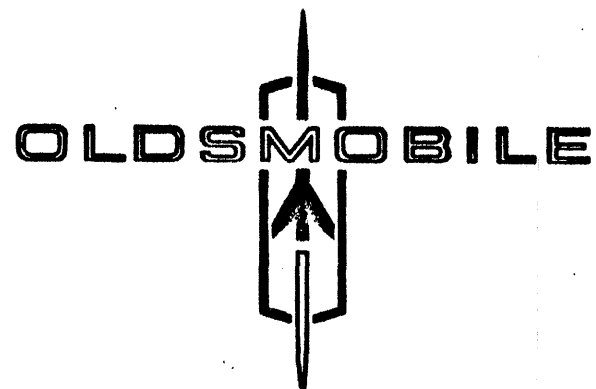
FRAME ASSY NO.	CODE	GROUP	USAGE
3943347	XL	2B	3567, 3667, 4467
3943349	XM	2B	3535, 3635
403501	GU	2B	4800
3943329	XJ	2B	116" WHEELBASE (EXC. S. W.)
3943331	XK	2B	112" WHEELBASE



★ ASSEMBLY PLANTS ONLY  
★ ★ LANSING PLANT ONLY  
OPT. FOR ASSY PLANTS

△ 30 - 45 LB. FT.

[illegible]



## **SECTION 3 FRONT SUSPENSION**

100	CHARTS
110	FRONT SUSPENSION COMPONENTS

GENERAL MOTORS CORPORATION  
LANSING — MICHIGAN

## D. GARDNER, JR. AND J. H. HARRIS

**TO READ CHART:**

READING CHART FROM LEFT TO RIGHT, THE FIRST OPTION REACHED THAT IS COMPLETELY SATISFIED WILL INDICATE THE SPRINGS TO BE USED ON THAT MODEL. IF NONE OF THE CONDITIONS ABOVE ARE SATISFIED, THE LAST COLUMN IS STANDARD CAR (LESS ALL OPTIONS SHOWN TO THE LEFT OF IT) AND WILL INDICATE THE SPRINGS TO BE USED.

STANDARD USAGE EXCEPT 35, 55 & 65 MODELS:  
USE HIGH RANGE SPRING ON L. H. SIDE OF CAR  
AND LOW RANGE ON R. H. SIDE.

TEMPORARY USAGE EXCEPT 35, 55 & 65 MODELS:  
WHEN BOTH SPRING RANGES ARE NOT AVAILABLE  
USE SAME RANGE SPRING ON BOTH SIDES OF CAR.

Ⓔ STANDARD USAGE FOR 35, 55 & 65 MODELS;  
USE SAME RANGE SPRINGS ON BOTH SIDES OF CAR.

TEMPORARY USAGE FOR 35, 55 & 65 MODELS;  
WHEN SAME RANGE SPRINGS FOR BOTH SIDES OF CAR  
ARE NOT AVAILABLE.

(PREFERRED) USE HIGH RANGE ON LEFT SIDE OF CAR AND LOW RANGE ON RIGHT SIDE OF CAR.

(OPTIONAL) USE LOW RANGE ON LEFT SIDE OF CAR AND HIGH RANGE ON RIGHT SIDE OF CAR.

TAPE IDENTIFICATION:  
HIGH LOAD RANGE - PLAIN IDENTIFICATION. LOW  
LOAD RANGE - BLACK CIRCLE AROUND CODE LETTER.

FOR SPRING DETAIL SEE DRAWING 400860.

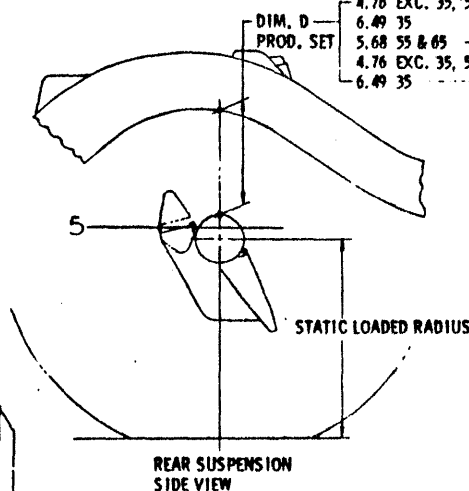
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# OLDSMOBILE DIVISION

GENERAL MOTORS CORPORATION  
LANSING — MICHIGAN

1. GENERAL, USE ONLY

DIM. D PROD. SET	4.76	EXC. 35, 55 & 65	LANSING
	6.49	35	
	5.68	55 & 65	GMAD PLANTS
	4.76	EXC. 35, 55 & 65	
	6.49	35	



## TOE-IN, CAMBER AND CASTER

**CAR HEIGHT:**  
PRODUCTION-SET CAR AT FRONT CARRYING HEIGHT USING DIMENSION (Z) AT D POSITION FRAME SIDE BAR TO ANGLE SHOWN BETWEEN POINTS (J) & (K).  
OPTIONAL METHOD - SET CAR AT DIMENSION (Z) FRONT, DIMENSION (D) REAR AND VARY TIRE PRESSURE TO OBTAIN EQUAL STATIC LOADED RADIUS FRONT & REAR.

SERVICE-SET CAR TO NORMAL CURB CARRYING HEIGHT USING SERVICE MANUAL ROCKER PANEL TO GROUND DIM. (GAS TANK FULL, TRUNK EMPTY EXCEPT FOR SPARE & JACK.)

**TOE-IN:**  
NOTE: STEERING WHEEL SPOKE MUST BE HELD IN HORIZONTAL PLANE DURING TOE-IN SETTING. AFTER TOE-IN SET, THE STEERING WHEEL MUST BE CENTERED WITHIN .62 LEFT AND .62 RIGHT AT RIM.

LANSING PROD. SETTING - DIMENSION (G)  $1/8"$  TO  $1/4"$  GREATER THAN DIMENSION (H).

GMAD PLANTS PROD. SETTING - DIMENSION (G)  $1/8"$  TO  $1/4"$  GREATER THAN DIMENSION (H) - VEHICLE MUST BE AT FREE STANDING HEIGHT IN THE AS SHIPPED CONDITION. A MINIMUM OF ONE COMPLETE THREAD MUST PROJECT BEYOND EACH END OF THE ROD SLEEVE AFTER TOE-IN IS SET (ALL PLANTS).

SERVICE LIMIT - DISTANCE FROM ONE TIRE TO THE OTHER AT POINT (G) SHOULD BE  $1/8"$  TO  $3/16"$  GREATER THAN AT POINT (H).

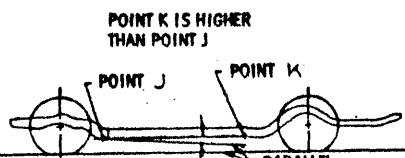
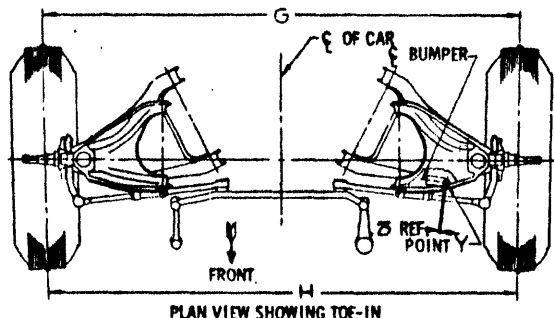
**CAMBER:**  
LANSING PROD. SETTING CAMBER ANGLE  $1/8^{\circ}$  POSITIVE  $\pm 3/8^{\circ}$   
GMAD PLANTS PROD. SETTING CAMBER ANGLE  $1/8^{\circ}$  POSITIVE  $\pm 1/2^{\circ}$

SERVICE LIMIT - CAMBER ANGLE  $1/4^{\circ}$  NEGATIVE TO  $1/2^{\circ}$  POSITIVE. EQUIVALENT DISTANCE (A) IS .12 LESS TO .06 MORE THAN (B). MAXIMUM VARIATIONS BETWEEN THE TWO SIDES OF THE CAR SHOULD NOT EXCEED  $1/2^{\circ}$  FOR BOTH PROD. & SERVICE SETTINGS.

**CASTER:**  
LANSING PROD. SETTING CASTER ANGLE TO BE  $1 1/4^{\circ}$  NEGATIVE  $\pm 3/4^{\circ}$   
GMAD PLANTS PROD. SETTING CASTER ANGLE  $1 1/4^{\circ}$  NEGATIVE  $\pm 3/4^{\circ}$

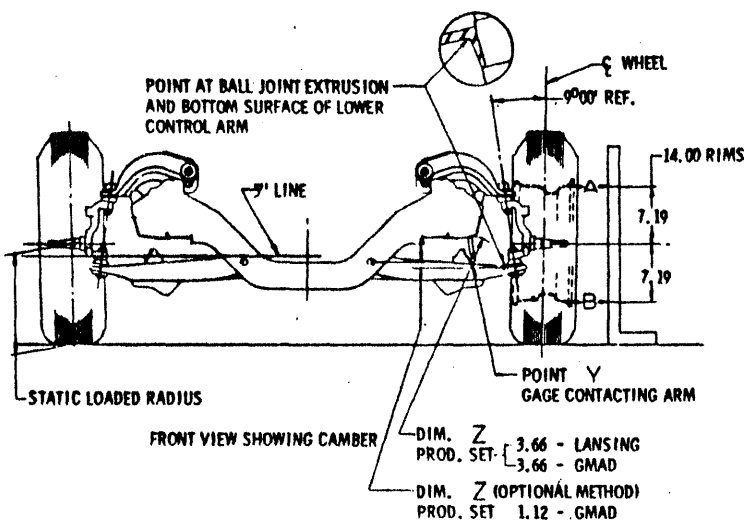
SERVICE LIMIT - CASTER ANGLE TO BE  $1/2^{\circ}$  NEGATIVE TO  $2^{\circ}$  NEGATIVE. MAXIMUM VARIATIONS BETWEEN THE TWO SIDES OF THE CAR SHOULD NOT EXCEED  $3/4^{\circ}$  FOR BOTH PROD. AND SERVICE SETTING.

TURNING ANGLE FROM STRAIGHT AHEAD POSITION: INNER WHEEL  $35^{\circ}15'$  - OUTER WHEEL  $33^{\circ}23'$ . FRONT WHEEL TRACK (AT GROUND) ALL MODELS 59.01 CURB, REAR WHEEL TRACK ALL MODELS 59.00.



0° 11' - EXC. 35, 55 & 65 10° 2' - 35 10° 14' - 55 & 65 (PICK UP PLATFORM SAME ANGLE AS 35)	LANSING
0° 11' - EXC. 35, 55 & 65 10° 2' - 35	GMAD PLANTS

FRAME ANGLES FOR PRODUCTION SETTING HEIGHT



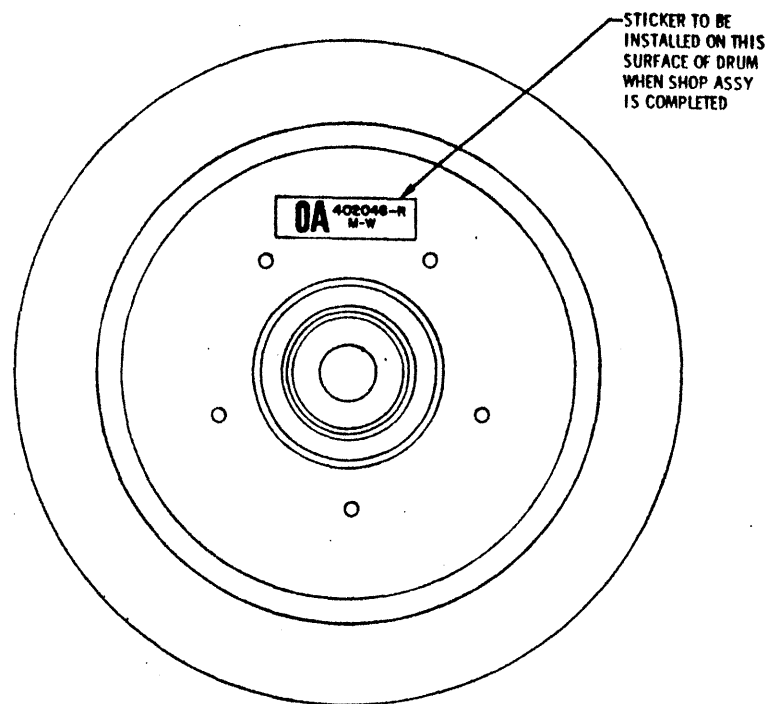
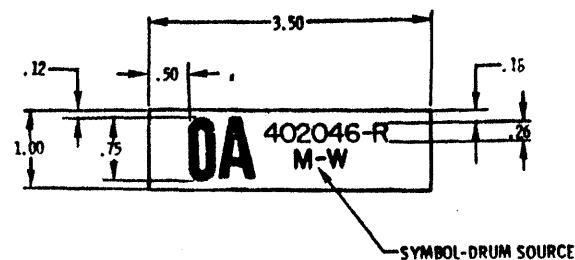
TITLE LAYOUT - FRONT WHEEL ALIGNMENT									
DATE	JULY 30, 1964	FIRST USED	1969	OLDSMOBILE PRODUCT INFORMATION MANUAL	MANUAL SEC.	3	PAGE	103	
DR BY	J. E. CASLER	CHECKED	J. H. L. HINES	REF.	SERIES	A	PART NO.	404421	
APPR.									

82968 A REVISED

**GENERAL MOTORS CORPORATION**  
**LANSING — MICHIGAN**

CODE	STEERING	BRAKES	PART NO.	MODELS
OF	MANUAL	POWER	402044-R. 402045-L	54, 64 & 6600
OT	MANUAL	MANUAL	403294-R. 403295-L	54, 64 & 6600
OA	POWER	POWER	402046-R. 402047-L	54, 64, 66, 84 & 8600
OP	POWER	MANUAL	403296-R. 403297-L	54, 64 & 6600
<b>NOTE: ON POWER BRAKE EQUIPPED CARS ONLY.</b> KNUCKLE ASSEMBLIES "OF" AND "OT" ARE OPTIONAL AND KNUCKLE ASSEMBLIES "OA" AND "OP" ARE OPTIONAL.				
OB	—	—	401996-R. 401997-L	ALL F85 EXC. EXT. WAGONS
OD	—	—	401998-R. 401999-L	ALL F85 EXT. WAGONS

**NOTE:**  
**KNUCKLE ASSEMBLIES MUST BE USED IN PAIRS AS SHOWN ABOVE.**



EXC.  
JL2, J55

SHEET 1 OF 2

															TITLE															CHART - KNUCKLE SHOP ASSEMBLY CODE																																												
															DATE DEC 12, 1967															FIRST USED															OLDSMOBILE PRODUCT															MANUAL SEC. PAGE														
															DR. BY DON MALKIN															1969															INFORMATION MANUAL															3 105														
															CHECKED J. RITTS															REF.															SERIES															PART NO.														
															APPR. J. RITTS																														A-B-C															402918														
															APPR.																																																											

															B2268 C REQUIRED															APPROUT																													
															31668 B2 PART NO 3 ADDED															GO JH																													
															42645 A WAS EXC USE J55															DO JH																													
DATE SYM REVISION															DR CK DATE SYM REVISION															DR CK DATE SYM REVISION															DR CK DATE SYM REVISION														

# OLDSMOBILE DIVISION GENERAL MOTORS CORPORATION LANSING — MICHIGAN

8. 000000 000 0000

## USAGE STEERING KNUCKLE ASSEMBLIES

CODE	STEERING	MODEL	PART NO.
OE	POWER	54, 64, 66 84 & 86 WITH JL2	402596-R, 402597-L
OH	MANUAL	54, 64, 66 WITH J55	404842-R, 404843-L
OG	POWER	54, 64, 66 84, 86 WITH J55	404844-R, 404845-L
OM		ALL F-85 WITH JL2 (EXCEPT W46)	402052-R, 402053-L
OU		ALL F-85 WITH JL2 & W46	405980-R, 405981-L

(C)

(B)

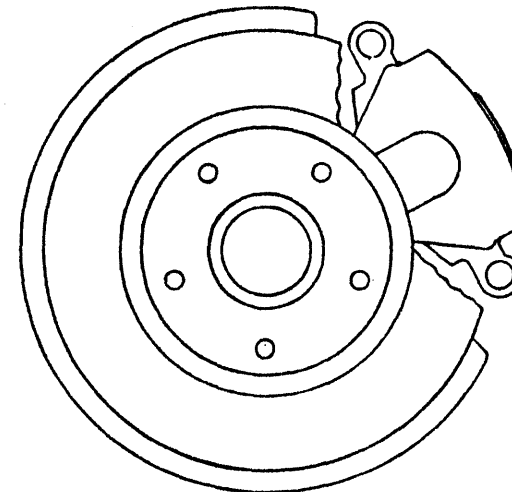
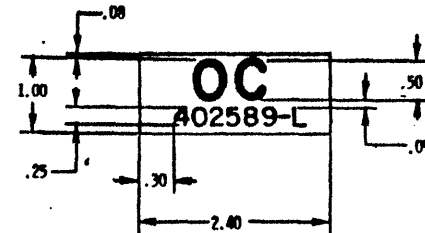
(F)

(G)

(B) (S) (J)

(D)

(H)



STICKER TO BE  
INSTALLED ON THIS  
SURFACE OF CALIPER  
WHEN SHOP ASSY  
IS COMPLETED.

(A)

JL2, J55

SHEET 2

REVISION				TITLE				CHART - KNUCKLE SHOP ASSEMBLY CODE			
REV	DATE	BY	REASON	REV	DATE	BY	REASON	REV	DATE	BY	REASON
1	12/9/67	J	(EXCEPT W46) ADDED	1	12/9/67	J	MODEL USAGE REVISED	1	12/9/67	J	MODEL USAGE REVISED
2	12/9/67	H	405980-1 ADDED	2	12/9/67	D	402054-5 REMOVED	2	12/9/67	D	402054-5 REMOVED
3	12/9/67	G	WAS 402600-1	3	12/9/67	C	402589-9 REMOVED	3	12/9/67	C	402589-9 REMOVED
4	12/9/67	F	WAS 402598-9	4	12/9/67	B	MODEL USAGE REVISED	4	12/9/67	B	MODEL USAGE REVISED
						A	WAS J52, J55			A	WAS J52, J55

CHART - KNUCKLE SHOP ASSEMBLY CODE

FIRST USED  
1969

OLDSMOBILE PRODUCT  
INFORMATION MANUAL

MANUAL SEC. 3  
PAGE 106

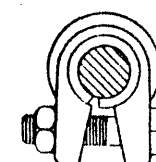
RET.

SERIES  
A-B-C

PART NO.  
402918

**GENERAL MOTORS CORPORATION**  
**LANSING — MICHIGAN**

- ★ AFTER REACHING MINIMUM TORQUE REQUIRED, NUT MUST ALWAYS BE TIGHTENED FURTHER, NEVER BACKED OFF, TO INSERT COTTER PIN. MAXIMUM AUDIT TORQUE NOT TO BE EXCEEDED FOR RE-INSTALLATION OF COTTER PIN AFTER AUDIT.

**FIGURE 3**

EXCEPT AT EDGES OF CLAMP JAWS OR BETWEEN CLAMP JAWS.

(A) FIGURE 1 SHOWS A CORRECT POSITION. FIGURES 2 AND 3 ARE INCORRECT POSITIONS.

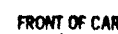


— CLAMP BOLTS MUST BE KEPT WITHIN THESE LIMITS TO INSURE CLEARANCE TO FRAME, STABILIZER SHAFT AND LOWER CONTROL ARM.

CLAMPS TO BE  $\pm 15^\circ$  FROM  
VERTICAL CENTERLINE



7801831-MANUAL STEERING LINKAGE ASM -EXC. G.M. OF CANADA  
7801832-POWER STEERING LINKAGE ASM  
3406420-MANUAL STEERING LINKAGE ASM -G.M. OF CANADA  
3406419-POWER STEERING LINKAGE ASM



---INTERMEDIATE ARM


**TIGHTEN STEERING GEAR AND IDLER ARM SUPPORT TO FRAME BOLTS AFTER SETTING INTERMEDIATE ROD TO FRAME DIMENSION ("A") TO THE MINIMUM POSSIBLE ON EACH CHASSIS ASSEMBLY.**

CLEARANCE-INTERMEDIATE ARM TO  
FRAME CROSS MEMBER



← NUMBER OF THREADS PROJECTING FROM EACH END OF TIE ROD SLEEVE MUST BE EQUAL WHEN TIE ROD IS ASSEMBLED TO PLANE ARM.

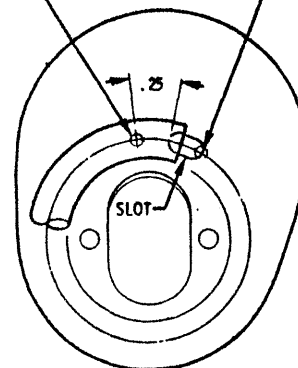
**WHEN MAKING FINAL ADJUSTMENTS OF TIE RODS, MAKE SURE THAT THE ROD END HOUSINGS ARE AT RIGHT ANGLES TO STEERING KNUCKLE ARMS IN SIDE VIEW.**

NUT   
(PART OF LINK ASSY)  
108629-PIN

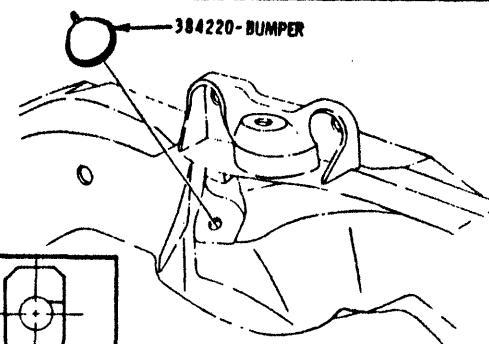
												TITLE												STEERING LINKAGE											
												DATE NOVEMBER 9, 1967												FIRST USED											
												DR. BY W.E. MASON												1969											
												CHECKED <i>W.E. Mason</i>												OLD MOBILE PRODUCT INFORMATION MANUAL											
												52868 B WAS 7805466-7												MANUAL SEC. PAGE											
												32968 A NOTE REVISED												3 110											
												APPR. <i>J.W. Swartz - W.C.</i>												SERIES											
												APPR. <i>Shc 11/16/68</i>												PART NO.											
DATE SYM REVISION												DR. CK. DATE SYM REVISION												401900											



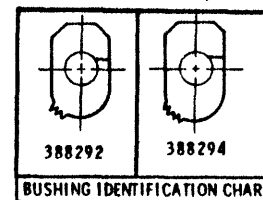
**© 2000 Blackwell Science Ltd**



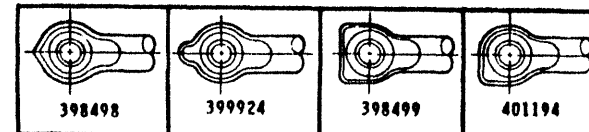
### SPRING TAIL POSITIONING IN LOWER CONTROL ARM



**VIEW A**



**BUSHING IDENTIFICATION CHAR**



### FRONT STABILIZER SHAFT IDENTIFICATION CHART

**NOTE**

**STABILIZER BAR MUST  
BE INSTALLED WITH  
IDENTIFICATION FORMING  
ON RIGHT SIDE OF CAR.**

**△ 60 - 120 LB. IN.**

**3 120 - 180 LB. IN.**

**4 15 - 25 LB. FT.**

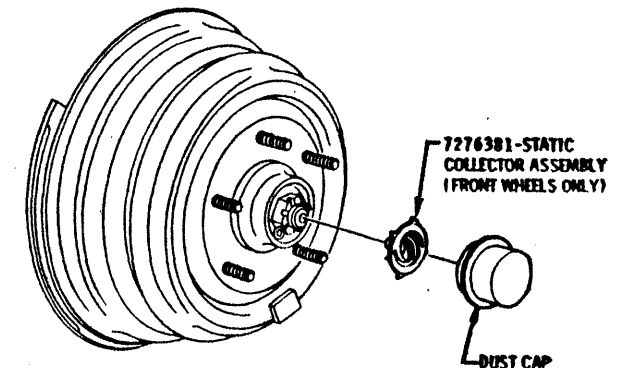
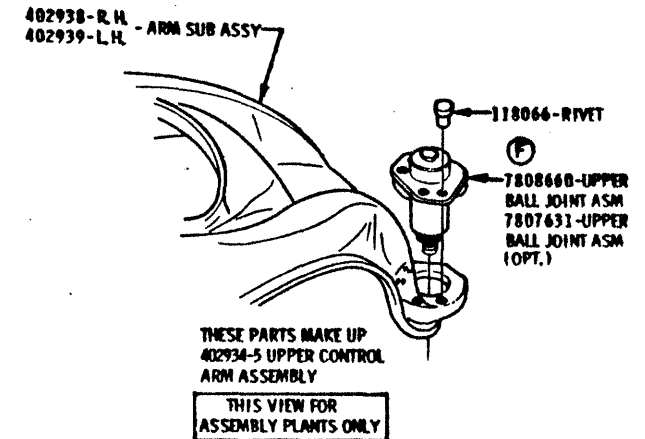
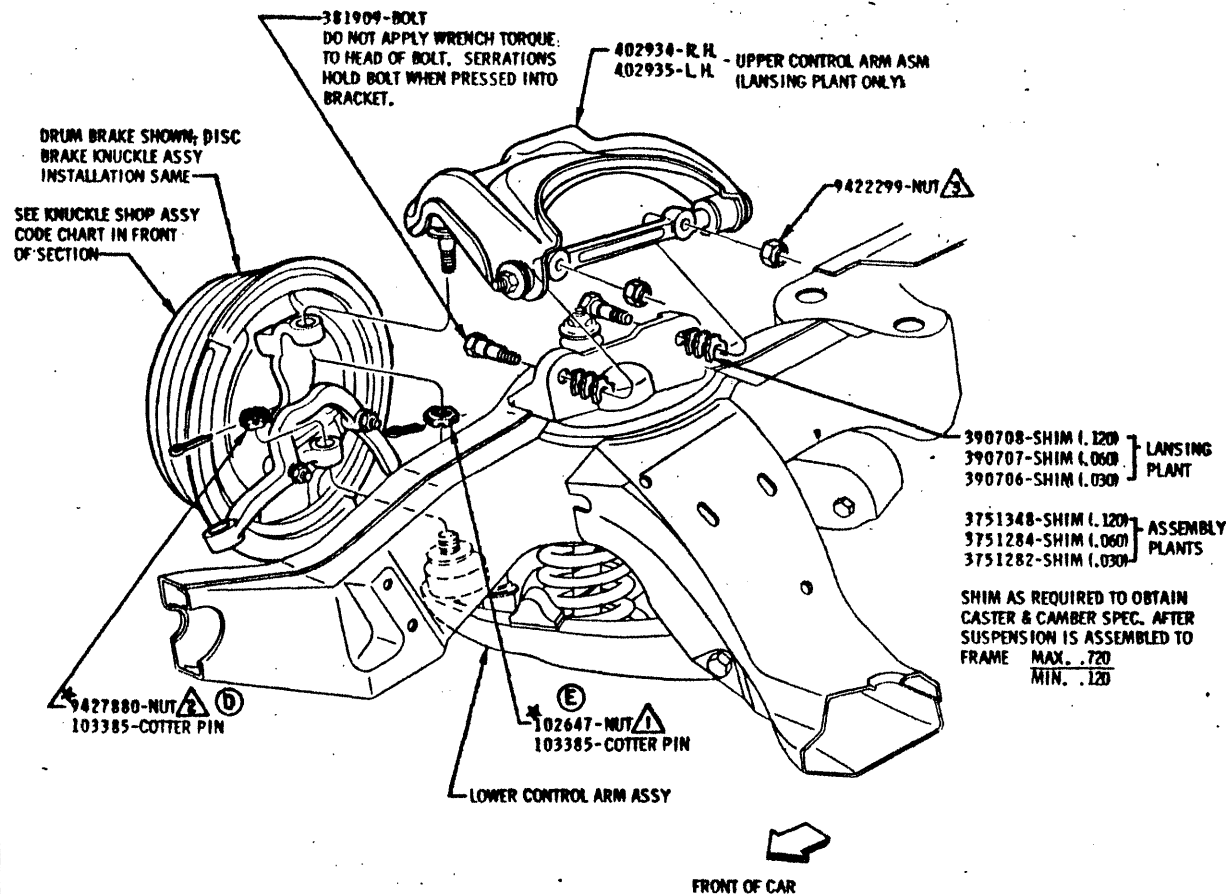
5 70 - 90 LB. FT. ★

6 90 - 120 LB. FT. ★

★ TORQUE NUTS OR BOLT HEADS AT ASSEMBLY WHILE CAR IS AT CURB LOAD HEIGHT. ANY RETORQUE SUBSEQUENT TO THE INITIAL APPLICATION MUST BE APPLIED TO THE SAME END AS TORQUED INITIALLY.

STABILIZER PART NO.	STAB. DIA.	BUSHING PART NO.	GROUP	MODELS
398498	.875	388292	3G	31, 3500
398499	.937	388294	3G	32, 36, 4200 EXC. 3667
399924	.970	388294	3G	3667, 4400
			35FE2	3277, 3677, 8
401194	1.000	388294	3G	4800

										FRONT SUSPENSION									
12-5-68 F CHART REVISED 11-12-68 D CHART REVISED 10-25-68 C TORQUE REVISED 8-15-68 B SPACER REMOVED 1-17-69 F CHART REVISED 5-20-68 A WRS 402038-9										TITLE DATE NOVEMBER 13, 1967 DR. BY W.E. MASON CHECKED <i>M. B. Bantart</i> APPR. <i>W. A. Anderson</i> DR. CK. <i>W. A. Anderson</i>									
NO. FC. DAY. SYM. REVISION										FIRST USED 1969 REF. 3A 3F 36									
NO. FC. DAY. SYM. REVISION										OLDSMOBILE PRODUCT INFORMATION MANUAL SERIES A									
NO. FC. DAY. SYM. REVISION										MANUAL SEC. PAGE 3 111 PART NO. 401900									



\* AFTER REACHING MINIMUM TORQUE REQUIRED, NUT MUST ALWAYS BE TIGHTENED FURTHER, NEVER BACKED OFF, TO INSERT COTTER PIN. MAXIMUM AUDIT TORQUE NOT TO BE EXCEEDED FOR RE-INSTALLATION OF COTTER PIN AFTER AUDIT.

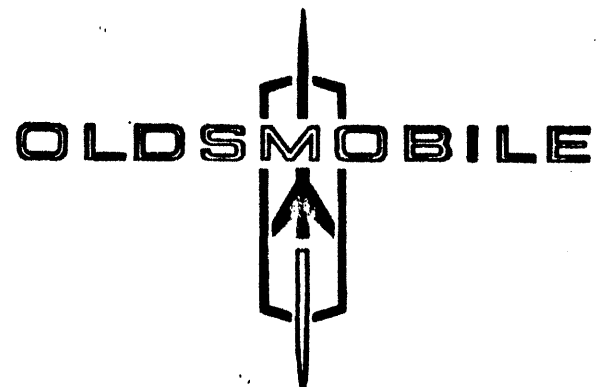
- △ 40 - 60 LB. FT.
- △ 70 - 95 LB. FT.
- △ 45 - 55 LB. FT.

REVISION										TITLE									
DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK
					11-20-68	E	WAS 103386 COTTER PIN			11-20-68	E	WAS 103386 COTTER PIN			11-20-68	E	WAS 103386 COTTER PIN		
					11-1-68	D	TORQUE REVISED			11-1-68	D	TORQUE REVISED			11-1-68	D	TORQUE REVISED		
					7-12-68	C	TORQUE REMOVED			7-12-68	C	TORQUE REMOVED			7-12-68	C	TORQUE REMOVED		
					5-28-68	B	WAS 402928-9			5-28-68	B	WAS 402928-9			5-28-68	B	WAS 402928-9		
					3-3-69	F	WAS 7805678			3-3-69	F	WAS 7805678			3-3-69	F	WAS 7805678		
					5-28-68	A	WAS 7805921			5-28-68	A	WAS 7805921			5-28-68	A	WAS 7805921		

FRONT SUSPENSION									
DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK
11-20-68	E	WAS 103386 COTTER PIN			11-20-68	E	WAS 103386 COTTER PIN		
11-1-68	D	TORQUE REVISED			11-1-68	D	TORQUE REVISED		
7-12-68	C	TORQUE REMOVED			7-12-68	C	TORQUE REMOVED		
5-28-68	B	WAS 402928-9			5-28-68	B	WAS 402928-9		
3-3-69	F	WAS 7805678			3-3-69	F	WAS 7805678		
5-28-68	A	WAS 7805921			5-28-68	A	WAS 7805921		

FRONT SUSPENSION									
DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK
11-20-68	E	WAS 103386 COTTER PIN			11-20-68	E	WAS 103386 COTTER PIN		
11-1-68	D	TORQUE REVISED			11-1-68	D	TORQUE REVISED		
7-12-68	C	TORQUE REMOVED			7-12-68	C	TORQUE REMOVED		
5-28-68	B	WAS 402928-9			5-28-68	B	WAS 402928-9		
3-3-69	F	WAS 7805678			3-3-69	F	WAS 7805678		
5-28-68	A	WAS 7805921			5-28-68	A	WAS 7805921		

FRONT SUSPENSION									
DATE	SYM	REVISION	DR	CK	DATE	SYM	REVISION	DR	CK
11-20-68	E	WAS 103386 COTTER PIN			11-20-68	E	WAS 103386 COTTER PIN		
11-1-68	D	TORQUE REVISED			11-1-68	D	TORQUE REVISED		
7-12-68	C	TORQUE REMOVED			7-12-68	C	TORQUE REMOVED		
5-28-68	B	WAS 402928-9			5-28-68	B	WAS 402928-9		
3-3-69	F	WAS 7805678			3-3-69	F	WAS 7805678		
5-28-68	A	WAS 7805921			5-28-68	A	WAS 7805921		



## **SECTION 4 REAR SUSPENSION**

100	CHARTS
110	PROPELLER SHAFT
111	REAR SUSPENSION COMPONENTS
115	SUPERLIFT SHOCK ABSORBERS

1. 1994-1995

SAME  
AS  
STANDARD  
CAR

READING CHART FROM LEFT TO RIGHT, THE FIRST OPTION REACHED THAT IS COMPLETELY SATISFIED WILL INDICATE THE SPRINGS TO BE USED ON THAT MODEL. IF NONE OF THE CONDITIONS ABOVE ARE SATISFIED, THE LAST COLUMN IS STANDARD CAR (LESS ALL OPTIONS SHOWN TO THE LEFT OF IT) AND WILL INDICATE THE SPRINGS TO BE USED.

														TITLE										CHART - REAR SPRING USAGE									
														DATE FEB. 26, 1968										FIRST USED									
														DR. BY DON MALKIN										1969									
														CHECKED J. A. RICE										OLD MOBILE PRODUCT									
														APPR. J. A. RICE										INFORMATION MANUAL									
														REF.										MANUAL SEC. PAGE									
																								4 100									
														SERIES										PART NO.									
														A										403616									

SERIES	ENGINE	TRANSMISSION	PLAINS ← (S) → PERFORMANCE									
			AXLE RATIOS							DEALER INSTALLED		
			2.56 (G96)	2.78 (G95)	3.08 (G90)	3.23 (G91)	*3.42 (G92)	*3.91 (G88)	*4.33 (G89)	4.33 (90-4)	4.66 (90-4)	5.00 (90-4)
33100 F-85 CUTLASS	250 L6 1 BBL (S) LOW AND L90 EXPORT	SM		S	A	A						
		M31		S	A	A						
		SM, M31 WITH C60			S	A						
33200 F-85	350 2 BBL LOW (S) AND L90 EXPORT (T)	SM, M14		A	S	A	A	A		A	A	A
		M20			S	A	A			A	A	A
		M21					S	A		A	A	A
		M31, M40 @	S	A	A	A	A	A		A	A	A
	350 4 BBL HIGH (L74) (S)	M31 WITH C60/Y72	A	S	A	A						
		SM, M14		A	S	A	A	A		A	A	A
		M20			S	A	A			A	A	A
		M21					S	A		A	A	A
	350 4 BBL (W31 OPTION) (S)	M38, M40 @	A	S	A	A	A	A		A	A	A
		M14, M20					A	S	A	A	A	A
		M21					A	A	S	A	A	A
		M38					A	S	A	A	A	A
33600 CUTLASS	350 2 BBL LOW (S) AND L90 EXPORT (S)	SM, M14		A	S	A	A	A		A	A	A
		M20			S	A	A			A	A	A
		M21					S	A		A	A	A
		M31	S	A	A	A	A	A		A	A	A
	350 4 BBL HIGH (L74) (S)	M31 WITH C60/Y72	A	S	A	A						
		M38, M40 @	S	A	A	A	A	A		A	A	A
		SM, M14		A	S	A	A	A		A	A	A
		M20			S	A	A			A	A	A
	350 4 BBL (W31 OPTION) (S)	M21					S	A		A	A	A
		M38, M40 @	A	S	A	A	A	A		A	A	A
		M14, M20					A	S	A	A	A	A
34200 CUTLASS SUPREME	350 4 BBL HIGH (S) AND 350 2 BBL LOW (L65) AND L90 EXPORT (S)	M21					A	A	S	A	A	A
		M38					A	S	A	A	A	A
		SM, M14		A	S	A	A	A		A	A	A
		M20			S	A	A			A	A	A
34400 4-4-2	400 4 BBL HIGH (S) (N)	M21					S	A		A	A	A
		M40	A	A	A	S	A	A		A	A	A
		M21					A	A	S	A	A	A
		M40					S	A	A	A	A	A
	400 4 BBL (W30 OPTION) (R)	M40					S	A	A	A	A	A
		M40					S	A	A	A	A	A
		M40					S	A	A	A	A	A
		M40					S	A	A	A	A	A
34800 VISTA- CRUISER	350 2 BBL LOW (S) AND L90 EXPORT	SM, M20				S						
		M40		S	A	A						
	350 4 BBL HIGH (L74)	SM, M20				S						
		M40		A	S	A						
	400 4 BBL HIGH (L31)	M40		S	A							
		M40										

S - STANDARD  
A - AVAILABLE  
@ - DENOTES LIMITED PRODUCTION  
RUN FOR M40 USAGE

SM - FULLY SYNCHRONIZED 3-SPEED MANUAL TRANSMISSION  
M14 - FULLY SYNCHRONIZED 3-SPEED MANUAL TRANSMISSION (FLOOR SHIFT)  
M20 - FULLY SYNCHRONIZED 4-SPEED MANUAL TRANSMISSION (FLOOR SHIFT) (WIDE RATIO)  
M21 - FULLY SYNCHRONIZED 4-SPEED MANUAL TRANSMISSION (FLOOR SHIFT) (CLOSE RATIO)  
M31 - 2-SPEED JETAWAY TRANSMISSION  
M38 - 3-SPEED TURBO - HYDRAMATIC "350" TRANSMISSION  
M40 - 3-SPEED TURBO-HYDRAMATIC "400" TRANSMISSION

C60 - AIR CONDITIONING  
Y72 - HEAVY DUTY COOLING

3.42 (G92), 3.91 (G88) OR 4.33 (G89) NOT AVAILABLE WITH C60/Y72

SHEET 1 OF 5  
MANUAL SEC. PAGE 4  
104  
402728  
CHART - REAR AXLE USAGE  
FIRST USED 1969  
DATE 12-18-12-1968  
BY BILL SCHMIDT  
CHECKED J. J. J. J.  
APPROVED J. J. J. J.

TITLE  
DATE 12-18-12-1968  
BY BILL SCHMIDT  
CHECKED J. J. J. J.  
APPROVED J. J. J. J.  
1969 T M40 ADDED  
1969 S7 LINES REVISED  
1969 R2 LINES ADDED  
1969 P COLUMN ADDED

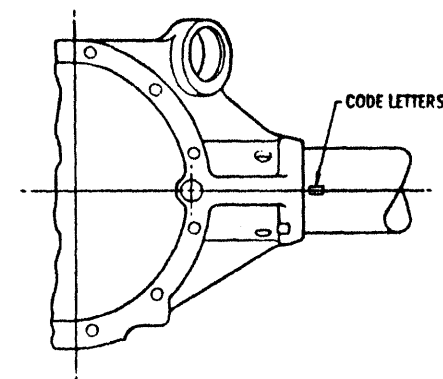
**GENERAL MOTORS CORPORATION**  
**LANSING - MICHIGAN**

Diagram illustrating the dimensions and layout of a typical tape identification label. The label is rectangular, with the text "SE" (representing "S" and "E") printed in red on a white background. The dimensions are specified in inches:

- Overall width: 1.96
- Overall height: 1.50
- Left margin: .12
- Character "S" width: .82
- Character "E" width: .78
- Right margin: .12
- Character height: .92
- Top margin: .22

Labels: "BACKGROUND TO BE WHITE" points to the white area, and "LETTERS TO BE RED" points to the red text.

TYPICAL TAPE IDENTIFICATION



**LOCATION OF  
CODE LETTERS**

THE FOLLOWING LIST OF COMPONENT PARTS ARE REQUIRED FOR USE IN CONJUNCTION WITH AXLE SUB-ASSEMBLY OF SELECTED RATIO FROM THE ABOVE CHARTS TO COMPLETE AXLE ASSEMBLY FOR USE ON PRODUCTION LINE OR ASSEMBLY PLANTS.

PART NO.	QUANTITY	DESCRIPTION
SEE CHART	1	AXLE SUB ASSEMBLY
396379	1	BRAKE ASSEMBLY
414999	2	GASKET
2474997	8	BOLT
SEE CHART	8	NUT
SEE CHART	2	SHAFT ASSEMBLY
358501	2	DRUM ASSEMBLY
1382429	4	NUT (ASSEMBLY PLANTS)
1394690	2	CABLE ASSEMBLY
404283	•	CABLE ASSEMBLY
9416029	•	CABLE ASSEMBLY
3820840	4	NUT (SPRING) (LANSING)
	1	VENT ASSEMBLY
	-	REAR (SELECT RATIO FROM CHART)
	-	REAR - L. & R.
	-	WHEEL BEARING (EXCEPT 4800)
	-	BRAKE TO AXLE
	-	BRAKE TO AXLE
	-	REAR AXLE
	-	REAR BRAKE
	-	DRUM TO AXLE
	-	REAR PARKING BRAKE
	-	REAR PARKING BRAKE (OPTION)
	-	REAR PARKING BRAKE (OPTION)
	-	DRUM TO AXLE
	-	REAR AXLE

THIS REPRESENTS AXLE AS USED AT LANSING PLANT AND AS SHIPPED TO G.M.A.D. PLANTS. FOR ASSEMBLY INFORMATION, SEE 402729. MANUFACTURER'S IDENTIFICATION MUST APPEAR ON THIS PART. LOCATION TO BE APPROVED BY THE ENGINEERING DEPARTMENT. OMISSION REQUIRES APPROVAL OF PURCHASING DIVISION.

PRODUCTION SAMPLE TO BE TESTED AND APPROVED BY PRODUCT ENGINEERING FOR OLDSMOBILE PARTS.

												TITLE												CHART - REAR AXLE USAGE											
12548 D 1405 516350810												DATE FEB 7, 1968												FIRST USED											
7368 C 101203 ADDED												DR BY J.E. CASLER												1969											
6666 B2 3.4213.51 RATIOS REMOVED												CHECKED J. PETERS												OLDSMOBILE PRODUCT INFORMATION MANUAL											
51468 A REVISED												APPR. T.P. LEONARD												MANUAL SEC. PAGE											
												DR. CK.												4 105											
												APP.												SERIES											
																								A											
																								PART NO.											
																								402728											

**GENERAL INVESTIGATIVE  
DIVISION - MEMPHIS**

37968	D
31468	C
43068	D
7368	A



THE FOLLOWING LIST OF COMPONENT PARTS ARE REQUESTED FOR USE IN CONSTRUCTION WITH ARTICULAR SUB-ASSEMBLY OF SELECTED PARTS FROM THE ABOVE CHARTS TO COMPLETE AXLE ASSEMBLY FORM USE ON PRODUCTION LINE OR ASSISTANT PLANTS.

PLANT NO.	QUANTITY	DESCRIPTION
SEE CHART	1	AXLE SUB ASSEMBLY
396279	1	BRAKE ASSEMBLY
414979	2	GASKET
2619971	8	BOLT
SEE CHART	8	NUT
SEE CHART	2	SHAFT ASSEMBLY
396268	2	DRUM ASSEMBLY
SEE CHART	4	NUT (ASSEMBLY PLANTS)
139429	4	CABLE ASSEMBLY
139440	2	CABLE ASSEMBLY
184923	•	CABLE ASSEMBLY
961629	•	NUT IS SPRING PLANTS INC
396260	4	NUT IS SPRING PLANTS INC
396260	1	VEHICLE ASSEMBLY

THIS REPRESENTS DATA AS USED AT LANSING PLANT AND AS SHIPPED TO G.M.A.B. PLANTS. FOR ASSEMBLY INFORMATION, SEE OTHER. MANUFACTURER'S IDENTIFICATION MUST APPEAR ON THIS PART. LOCATION TO BE APPROVED BY THE ENGINEERING DEPARTMENT. OMISSION REQUIRES APPROVAL OF PURCHASING DIVISION.

**PRODUCTION SAMPLE TO BE TESTED AND APPROVED BY PRODUCT ENGINEERING FOR OLDSMOBILE PARTS.**

[illegible]

[illegible]

C60 - AIR CONDITIONING  
Y72 - HEAVY DUTY COOLING

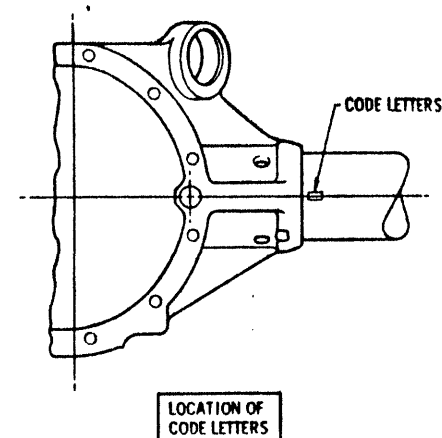
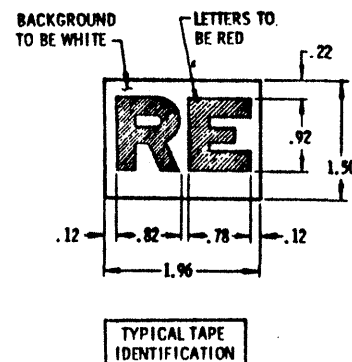
Ⓐ ★ G80 (LIMITED SLIP OPTION) MANDATORY ON 3.55, 3.73 RATIOS



**GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN**

EQUIPMENT	L.O. AXLE ASM 1833708	CODE	RATIO	DIFFERENTIAL CARRIER ASM.		AXLE SHAFT ASM.	BRAKE ASM.	BRAKE DRUM ASM.	
				CHART 1825069	GEAR TEETH				
STANDARD DIFFERENTIAL									
	403474	RB	2.56		1825076	41-16	1304242	1231299-L.H. 1231298-R.H.	1306562
	403475	RA	2.73		1825072	41-15			
	403476	RC	3.07		1825070	43-14			
	403477	RE	3.31		1825074	43-13			

LIMITED SLIP DIFFERENTIAL									
	403480	R9	2.56		1825077	41-16	1384282	1231299-L, H. 1231298-R, H.	1386562
	403481	R8	2.73		1825073	41-15			
	403482	RD	3.07		1825071	43-14			
	403483	RF	3.31		1825075	43-13			
	404497	TL	3.55		1825079	39-11			
	404498	TH	3.73		1833834	41-11			



THE FOLLOWING COMPONENT PARTS ARE REQUIRED FOR USE WITH DIFFERENTIAL CARRIER ASSEMBLY OF SELECTED RATIO FROM THE ABOVE CHARTS TO COMPLETE AXLE ASSEMBLY FOR USE ON PRODUCTION LINE.

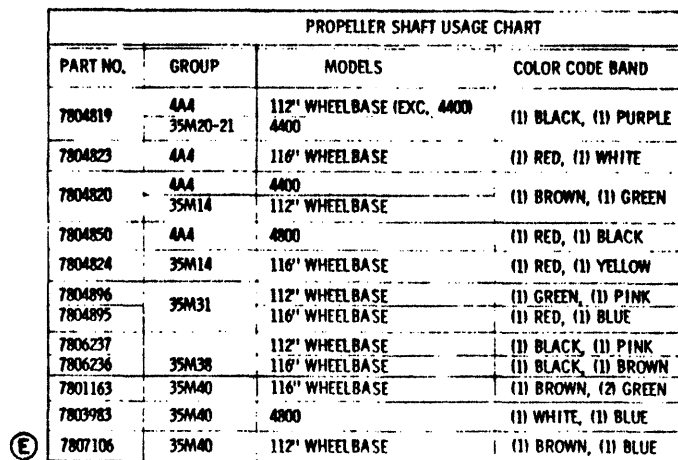
PART NO.	QUANTITY	DESCRIPTION
	1	DIFF. CARRIER ASM - (SELECT RATIO FROM CHART)
SEE CHART	1	BRAKE ASSEMBLY - REAR - R. & L.
186644	8	BOLT - FLANGE PLATE TO AXLE
103321	8	WASHER (LOCK) - FLANGE PLATE TO AXLE
103026	8	NUT - FLANGE PLATE TO AXLE
7451405	2	BEARING - REAR WHEEL
3832418	2	SEAL ASSY - REAR WHEEL BEARING
SEE CHART	2	SHAFT ASSEMBLY - REAR AXLE
3833322	2	LOCK - AXLE SHAFT
SEE CHART	2	DRUM ASSEMBLY - REAR BRAKE
3656898	6	NUT (SPRING) - DRUM TO AXLE
1382429	2	CABLE ASSEMBLY - REAR PARKING BRAKE
3820840	1	VENT ASSEMBLY - REAR AXLE

THIS REPRESENTS AXLE AS USED BY G.M. OF CANADA (OSHAWA). FOR ASSEMBLY INFORMATION, SEE 1833708. MANUFACTURER'S IDENTIFICATION MUST APPEAR ON THIS PART. LOCATION TO BE APPROVED BY ENGINEERING DEPARTMENT. OMISSION REQUIRES APPROVAL OF PURCHASING DIVISION.

[illegible]

**GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN**

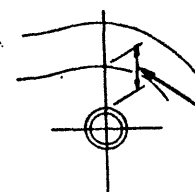
**Q. CLARK: MAY, 1961**



 12 - 16 LB. FT.

[illegible]

GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN



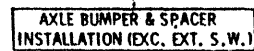
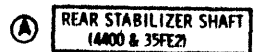
TIGHTEN UPPER AND LOWER CONTROL ARM BUSHING BOLTS WITH SPRING COMPRESSED SO TOP OF AXLE TO FRAME IS: 4.68 ± .25 EXC. S.W. 5.67 ± .25 S.W., AND 4.61 ± .25 EXT. WAGON.

SPRING MUST BE POSITIONED  
WITH END OF BOTTOM COIL  
TOWARD REAR OF CHASSIS  
WITHIN LIMITS SHOWN




**VIEW A**  
BOTH SIDES

[illegible]

GENERAL MOTORS CORPORATION  
LANSING — MICHIGAN



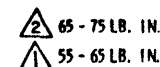
## SHOCK ABSORBER AND BUMPER INSTALLATION EXTENDED STATION WAGONS

	60 - 120 LB. IN.
	35 - 55 LB. FT.
	45 - 55 LB. FT.

[illegible]

GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN

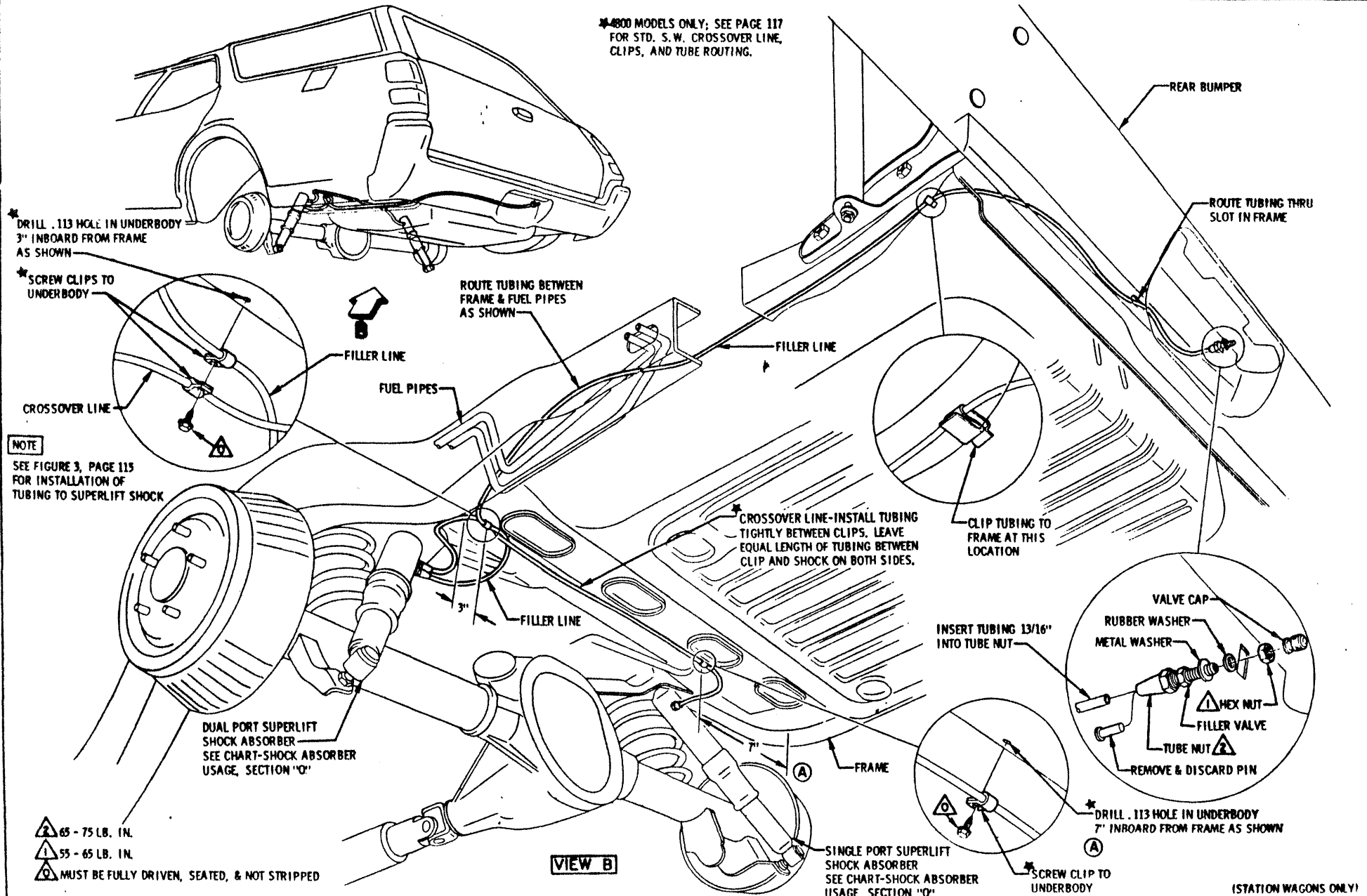
**9. SUMMARY AND CONCLUSIONS**



**FIGURE 1**  
(EXC. ALL STATION WAGONS)

[illegible]

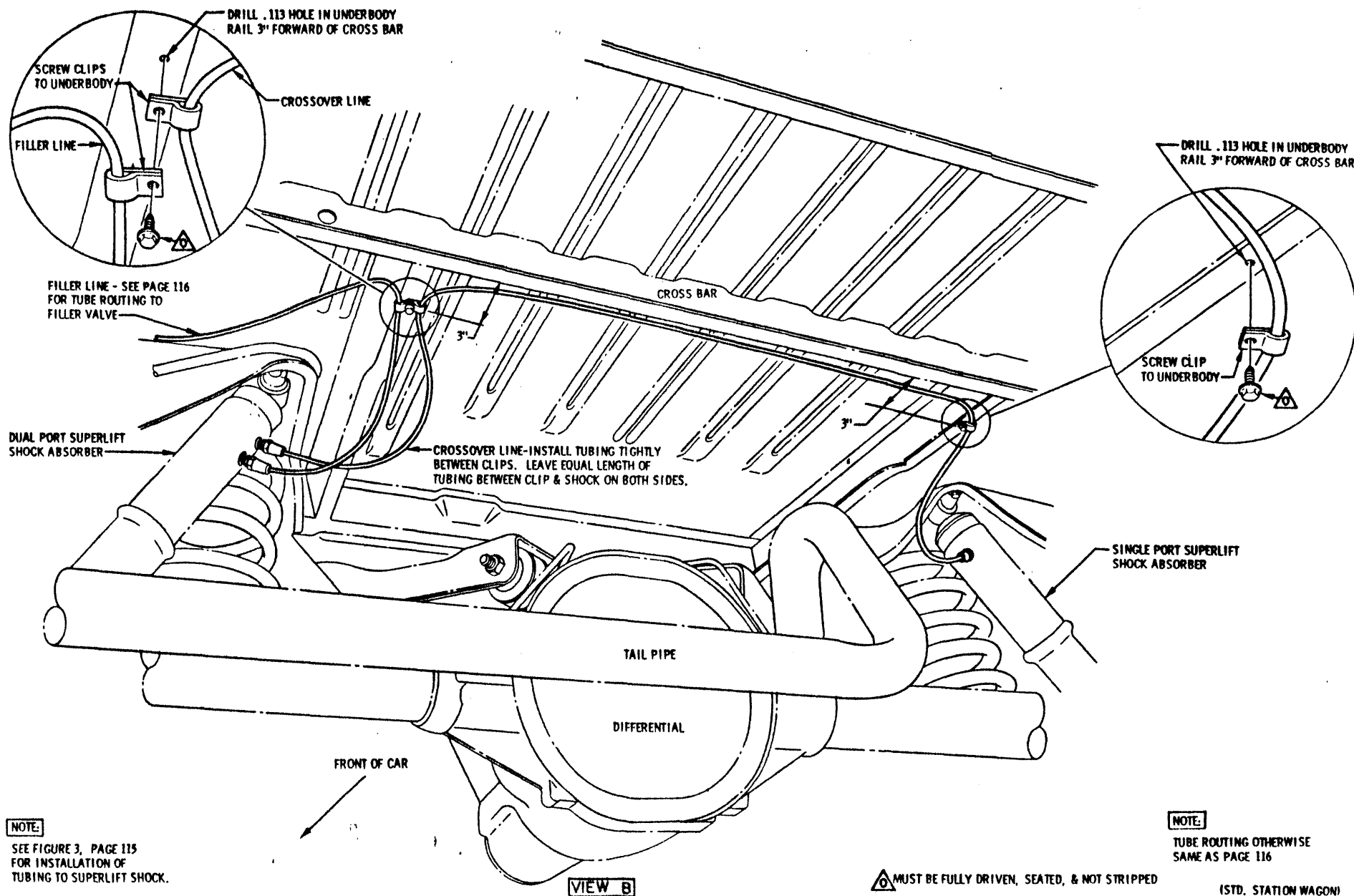
\*4800 MODELS ONLY; SEE PAGE 117  
FOR STD. S.W. CROSSOVER LINE,  
CLIPS, AND TUBE ROUTING.



TITLE										SUPERLIFT SHOCK ABSORBER			
DATE										FIRST USED			
14, 1967										1969			
DR. BY										OLDSMOBILE PRODUCT			
W. E. MASON										INFORMATION MANUAL			
CHECKED										MANUAL SEC.			
J. E. MASON										4			
REF.										PAGE			
116										116			
SERIES										PART			
A										401000			

# OLDSMOBILE DIVISION

GENERAL MOTORS CORPORATION  
LANSING — MICHIGAN



TITLE										SUPERLIFT SHOCK ABSORBER									
DATE <u>DECEMBER 10, 1967</u>										FIRST USED <u>1969</u>									
DR. BY <u>M.E. MASON</u>										OLDSMOBILE PRODUCT INFORMATION MANUAL									
CHECKED <u>M.E. MASON</u>										MANUAL SEC. <u>4</u> PAGE <u>117</u>									
APPR. <u>J.O. Sullivan</u>										SERIES <u>A</u> PART NO. <u>401900</u>									
APPR. <u>SM 11/15/68</u>										REF. <u>35666</u>									
DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.	DATE	SYM	REVISION	DR.	CK.

# OLDSMOBILE DIVISION

GENERAL MOTORS CORPORATION  
LANSING — MICHIGAN

## GENERAL INSTRUCTIONS

1. GUARD AGAINST KINKING NYLON TUBING, KINKED LINES WILL RESULT IN TUBING FAILURE.
2. AT EVERY PLUMBING CONNECTION, USE THE FOLLOWING PROCEDURE TO ASSEMBLE THE 1/8" DIAMETER BLACK TUBING PER FIGURE 3:
  - A. MARK TUBING WITH PENCIL 13/16" FROM END (SAME LENGTH AS TUBE NUT).
  - B. PULL PLASTIC PIN FROM END OF TUBE NUT AND DISCARD.
  - C. WITHOUT LOOSENING TUBE NUT, PUSH TUBING INTO TUBE NUT TO PENCIL MARK.
  - D. TIGHTEN TUBE NUT WITH WRENCH.
3. ATTACH "CAUTION" LABEL TO INSIDE OF GLOVE BOX DOOR PER FIGURE 2.
4. PLACE OWNERS GUIDE IN GLOVE BOX.

## SUPERLIFT INSTALLATION

1. RAISE CAR ON A HOIST THAT WILL KEEP REAR WHEELS IN NORMAL RELATIONSHIP WITH CAR BODY. IF FRAME LIFTING TYPE HOIST IS USED, PLACE STANDS UNDER REAR AXLE TO MAINTAIN NORMAL WHEEL TO BODY RELATIONSHIP.
2. REMOVE REAR SHOCKS, RETAIN ATTACHING PARTS FOR INSTALLING SUPERLIFTS.
3. INSTALL DUAL PORT SUPERLIFT ON LEFT SIDE OF CAR AND SINGLE PORT UNIT ON RIGHT SIDE. PORTS WILL BE FACING INWARD TO CENTER OF CAR. TO AVOID TWISTING RUBBER SLEEVE, DO NOT ROTATE FREE END OF SUPERLIFT AFTER ONE END HAS BEEN ATTACHED.

## FILLER VALVE INSTALLATION

1. ALL SEDANS AND COUPES
  - A. ATTACH FILLER VALVE TO FILLER LINE PER VIEW A.
  - B. INSERT FILLER VALVE THRU DEPRESSED HOLE IN BUMPER BEHIND LICENSE PLATE DOOR AND ATTACH TO BUMPER PER VIEW A.
2. ALL STATION WAGONS
  - A. REMOVE LICENSE PLATE. REMOVE R.H. PLASTIC NUT FROM BUMPER AND DISCARD.
  - B. ATTACH FILLER VALVE TO FILLER LINE PER VIEW B.
  - C. REPLACE LICENSE PLATE AND INSTALL FILLER VALVE THRU UPPER R.H. HOLE IN BUMPER AND LICENSE PLATE AND ATTACH HEX NUT PER VIEW B.

## CROSSOVER AND FILLER LINE INSTALLATION

1. ALL SEDANS AND COUPES
  - A. FOR CROSSOVER LINE CUT A 37" LENGTH OF NYLON TUBING.
  - B. ROUTE CROSSOVER LINE BEHIND FUEL TANK SUPPORT STRAPS AND CLIP TO EDGE OF TANK WITH TWO METAL PUSH-ON CLIPS PER FIGURE 1. ATTACH ENDS OF CROSSOVER LINE TO SUPERLIFT AIR PORTS PER FIGURE 3. ON THE DUAL PORT SUPERLIFT, ATTACH CROSSOVER LINE TO TOP PORT PER FIGURE 3.
  - C. FOR FILLER LINE CUT A 65" LENGTH OF NYLON TUBING.
  - D. ROUTE FILLER LINE TUBING PER FIGURE 1 THRU FRAME INNER RAIL, BACK TO REAR OF FUEL TANK, PASSING BETWEEN FUEL TANK SUPPORT STRAP AND UNDERBODY AND OVER FUEL FILLER NECK TO FILLER VALVE.
  - E. ADJUST CROSSOVER AND FILLER LINES FOR MAXIMUM CLEARANCE FROM TAIL PIPE. LEAVE A GENEROUS LOOP AT SUPERLIFT PORTS TO ALLOW FOR SUPERLIFT MOVEMENT WITH AXLE JOUNCE.
2. ALL STATION WAGONS
  - A. FOR CROSSOVER LINE CUT A 47 1/2" LENGTH OF NYLON TUBING.
  - B. ROUTE AND CLIP CROSSOVER LINE TO UNDERBODY PER VIEW B. ATTACH ENDS OF CROSSOVER LINE TO SUPERLIFT AIR PORTS PER FIGURE 3. ON THE DUAL PORT SUPERLIFT ATTACH CROSSOVER LINE TO TOP PORT PER VIEW B.
  - C. FOR FILLER LINE CUT AN 80" LENGTH OF NYLON TUBING.
  - D. ROUTE FILLER LINE TUBING PER VIEW B THRU NYLON CLIP ON UNDERBODY AND ALONG FRAME SIDE RAIL TO REAR OF CAR. CLIP TUBING TO SIDE RAIL USING METAL PUSH-ON CLIP PER VIEW B. CONTINUE ROUTING TUBING ALONG REAR OF FRAME TO FILLER VALVE.
  - E. ADJUST CROSSOVER AND FILLER LINES FOR MAXIMUM CLEARANCE FROM TAIL PIPE. LEAVE A GENEROUS LOOP AT SUPERLIFT PORTS TO ALLOW FOR SUPERLIFT MOVEMENT WITH AXLE JOUNCE.

## LEAK CHECK

1. FILL SUPERLIFT SYSTEM THROUGH FILLER VALVE WITH AIR TO 100 PSI PRESSURE.
2. CHECK ALL FITTINGS FOR LEAKS WITH GAS LEAK DETECTOR, LIQUID DETERGENT, OR A SOAP AND WATER SOLUTION. CORRECT ANY LEAKS FOUND.
3. EXHAUST AIR FROM SYSTEM BY DEPRESSING STEM IN FILLER VALVE NECK. RETAIN A MINIMUM PRESSURE OF 10 PSI.
4. PARTS NOT USED MAY BE DISCARDED AFTER INSTALLATION IS COMPLETE.

TITLE										SUPERLIFT SHOCK ABSORBER									
DATE										FIRST USED									
DECEMBER 14, 1967										1969									
DR. BY										OLDSMOBILE PRODUCT									
W.C. MASON										INFORMATION MANUAL									
CHECKED										MANUAL SEC. PAGE									
J.D. Barnhart										4 118									
APPR.										REF.									
3.0										35G66									
DATE										SERIES									
1/15/74										A									
PART NO.										401900									








## **SECTION 5 BRAKE SYSTEM**

- 110 BRAKE CYLINDERS, BRACKET AND ARM
- 111 BRAKE SWITCHES
- 112 BRAKE PIPING
- 116 POWER VACUUM HOSES
- 117 PARKING BRAKE

**GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN**



**FILL MASTER CYLINDER RESERVOIR  
TO 1/4 ± 1/8 INCH FROM TOP  
MEASURED AT REAR EDGE WITH  
.846 PINTS OF 9985013 BRAKE FLUID.**

	11 - 16 LB. FT.
	20 - 28 LB. FT.
	20 - 30 LB. FT.

[illegible]

**GENERAL MOTORS CORPORATION  
LANSING — MICHIGAN**



**EXC. CRUISE CONTROL**



### CARS WITH CRUISE CONTROL

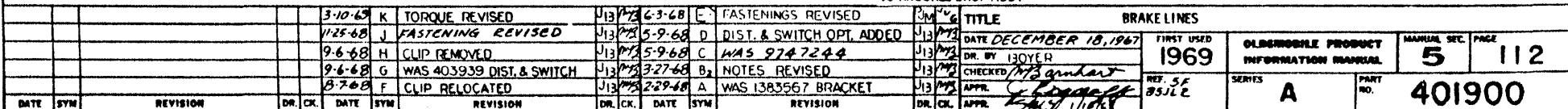
-  DMS

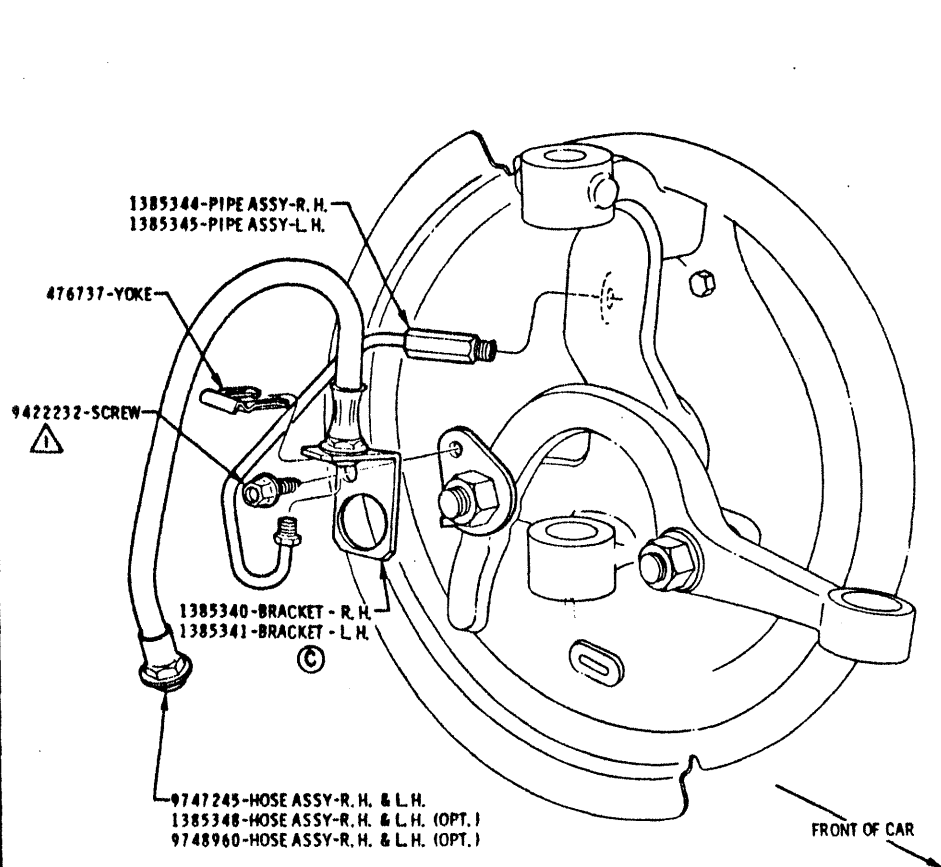
**MUST BE FULLY DRIVEN SEATED AND NOT STRIPPED**

- ② LUBRICATE AREAS INDICATED  
WITH 9985038 GREASE**

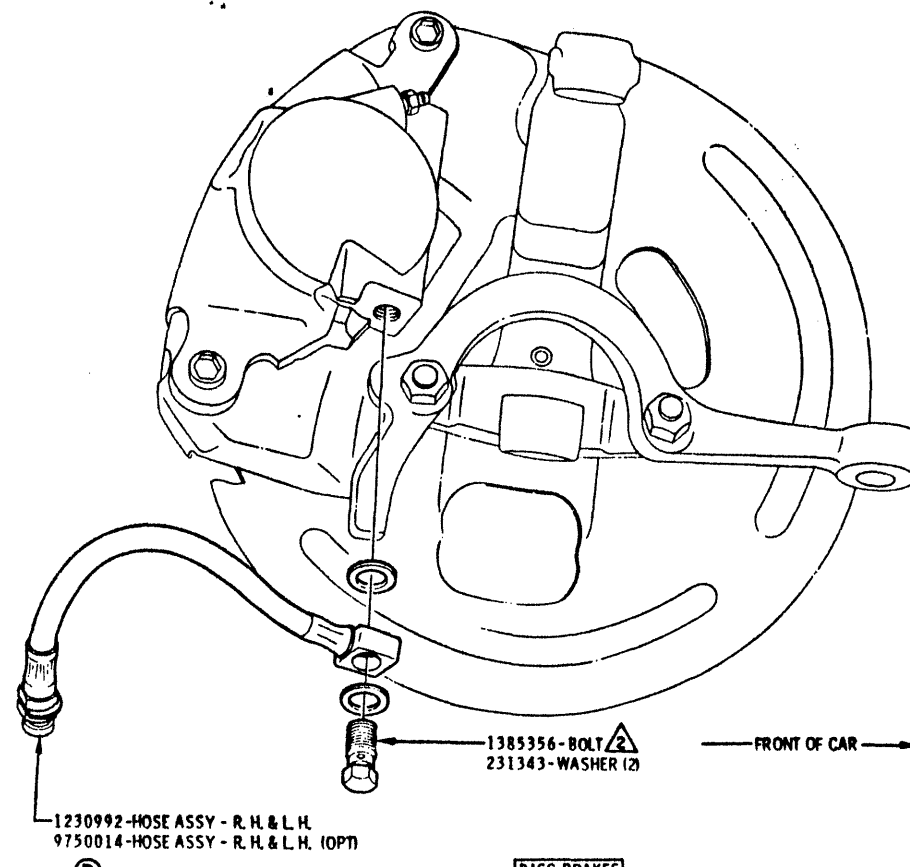
[illegible]

**GENERAL MOTORS CORPORATION  
LANSING — MICHIGAN**





DRUM BRAKES



DISC BRAKES

(L.H. SHOWN, R.H. OPPOSITE)

18-25 LB. FT. (E)  
72-120 LB. IN.

																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					</
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**GENERAL MOTORS CORPORATION  
LANSING - MICHIGAN**

## LEAK TEST (DIFFERENTIAL PRESSURE TYPE EQUIPMENT) FOR STANDARD AND POWER BRAKE CYLINDERS

**TEST MUST BE MADE ON REAR CHAMBER ONLY  
WITH ALL HYDRAULIC COMPONENTS ASSEMBLED TO CAR  
AND CONNECTIONS COMPLETED, DIFFERENTIAL PRESSURE  
NEEDLE MUST ATTAIN A STATIC POSITION FOR A MINIMUM  
OF 5 SECONDS WHILE THE REAR SYSTEM IS SUBJECTED TO  
1800 - 2000 P. S. I.**

IF PEDAL JACK IS USED IN ADDITION TO THE DIFFERENTIAL PRESSURE TYPE EQUIPMENT, THE FORCE IMPOSED ON THE PEDAL MUST NOT CAUSE A HYDRAULIC PRESSURE IN THE BRAKE HYDRAULIC SYSTEM THAT EXCEEDS 2000 P. S. I.

WITH 2000 P. S. I. IN SYSTEM - DISTRIBUTOR AND SWITCH  
ASSEMBLY ELECTRICAL CIRCUIT TO BE CHECKED AND  
CIRCUIT MUST BE OPEN.

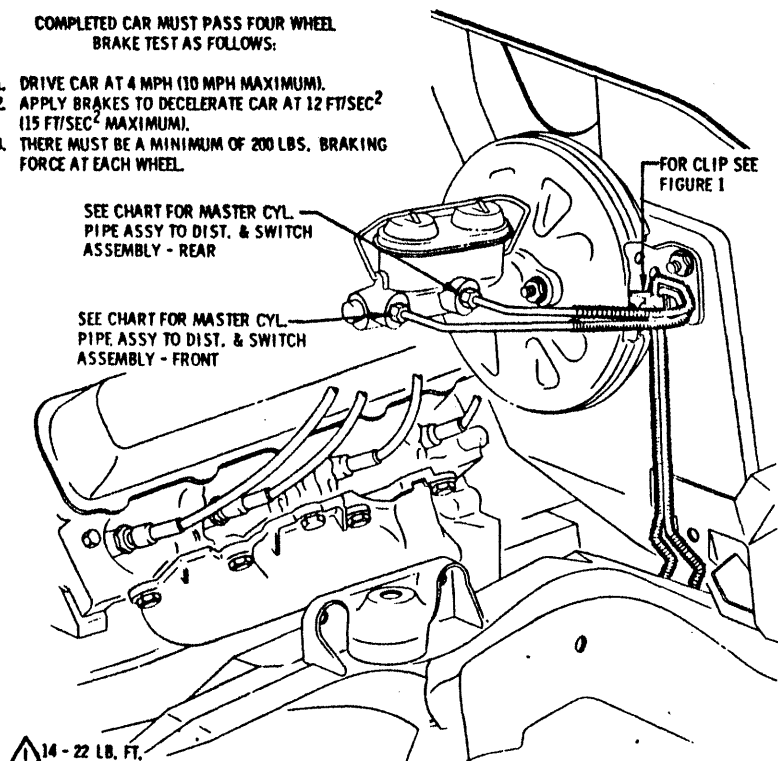
COMPLETED CAR MUST PASS FOUR WHEEL  
BRAKE TEST AS FOLLOWS:

1. DRIVE CAR AT 4 MPH (10 MPH MAXIMUM).
2. APPLY BRAKES TO DECELERATE CAR AT  $12 \text{ FT/SEC}^2$  ( $15 \text{ FT/SEC}^2$  MAXIMUM).
3. THERE MUST BE A MINIMUM OF 200 LBS. BRAKING FORCE AT EACH WHEEL.

SEE CHART FOR MASTER CYL. —  
PIPE ASSY TO DIST. & SWITCH  
ASSEMBLY - REAR

SEE CHART FOR MASTER CYL.—  
PIPE ASSY TO DIST. & SWITCH  
ASSEMBLY - FRONT

—FOR CLIP SEE  
FIGURE 1




**POWER DRUM BRAKES**

BRAKE PIPE CHART		
PIPE ASSEMBLY	USAGE	CODE
1231004-CENTER	35-36-42 SEDANS AND REG. S. WAG.	
1231006-CENTER	31 & 3200 AND ALL COUPES	
1231005-CENTER	CONVERTIBLE	
1231007-CENTER	4800	
1230994-R. FRONT BRAKE	ALL	
1230995-L. FRONT BRAKE	ALL	
403656-R. REAR AXLE	EXC. 4800	
406522- R. REAR AXLE	4800	
403657-L. REAR AXLE	EXC. 4800	
406523- L. REAR AXLE	4800	
1383291-MASTER CYL. TO DIST.-FRONT	EXC. 35J50, 35JL2	
1386036-MASTER CYL. TO DIST.-REAR	EXC. 35J50, 35JL2	
1383292-MASTER CYL. TO DIST.-REAR	35J50, 35JL2	
1383290-MASTER CYL. TO DIST.-FRONT	35J50	
3923311-METERING VALVE TO DIST.-FRONT	35JL2	
1384694-MASTER CYL. TO METERING VALVE	35JL2	

SEE CHART FOR MASTER CYL-  
PIPE ASSY TO METERING VALVE

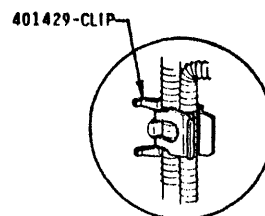
3905525-METERING VALVE ASSY-  
3912539-BRACKET (LANSING ONLY)

—3848408-SCREW AND  
LOCK WASHER ASSY 

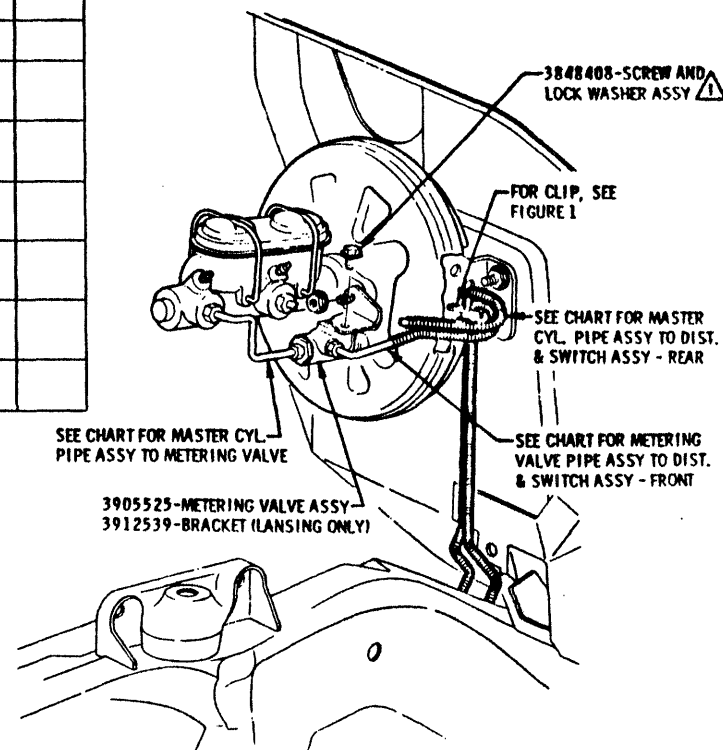
✓ FOR CLIP, SEE  
FIGURE 1

SEE CHART FOR MASTER  
CYL. PIPE ASSY TO DIST.  
& SWITCH ASSY - REAR

— SEE CHART FOR METERING  
VALVE PIPE ASSY TO DIST.  
& SWITCH ASSY - FRONT

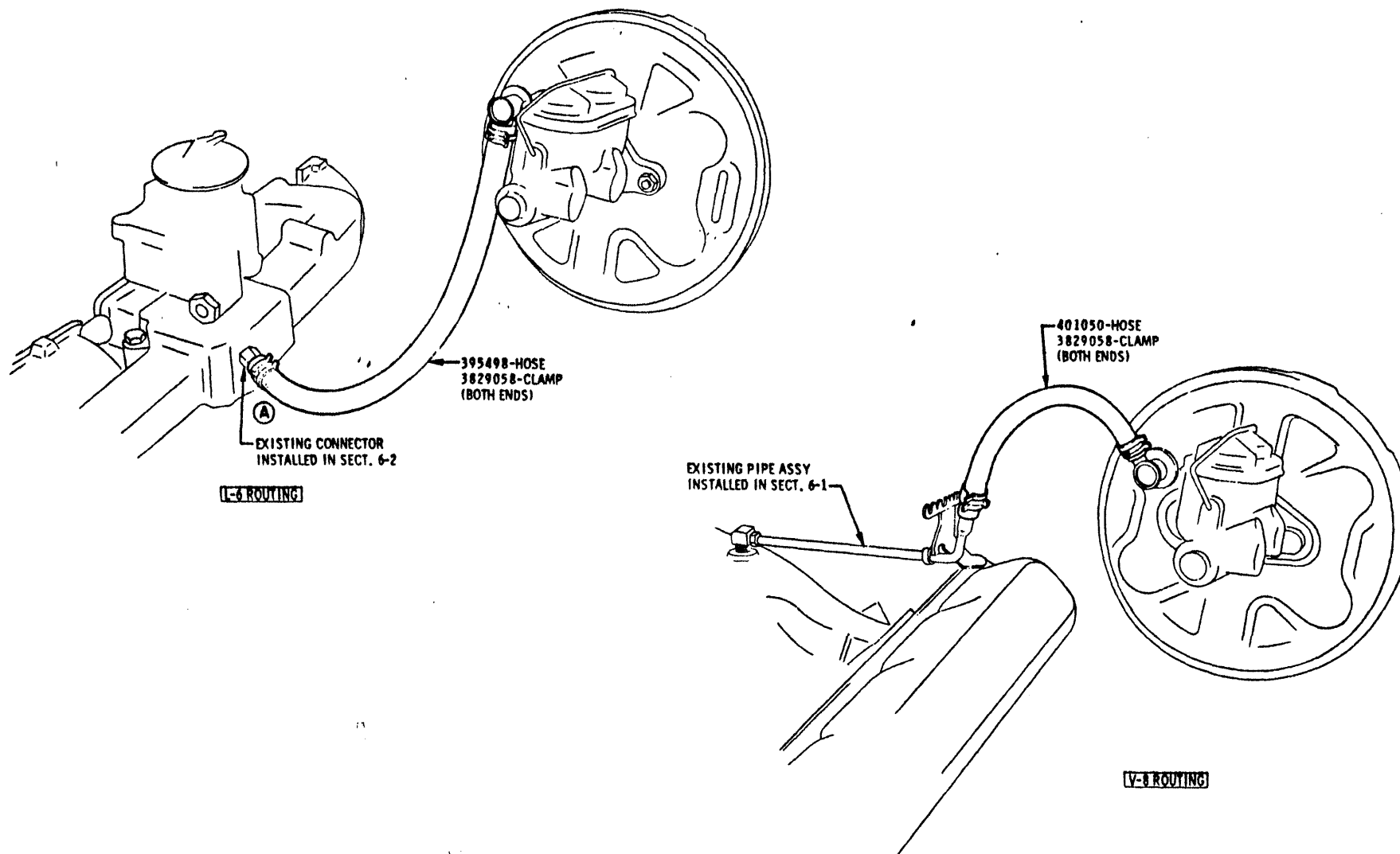


**FIGURE 1**



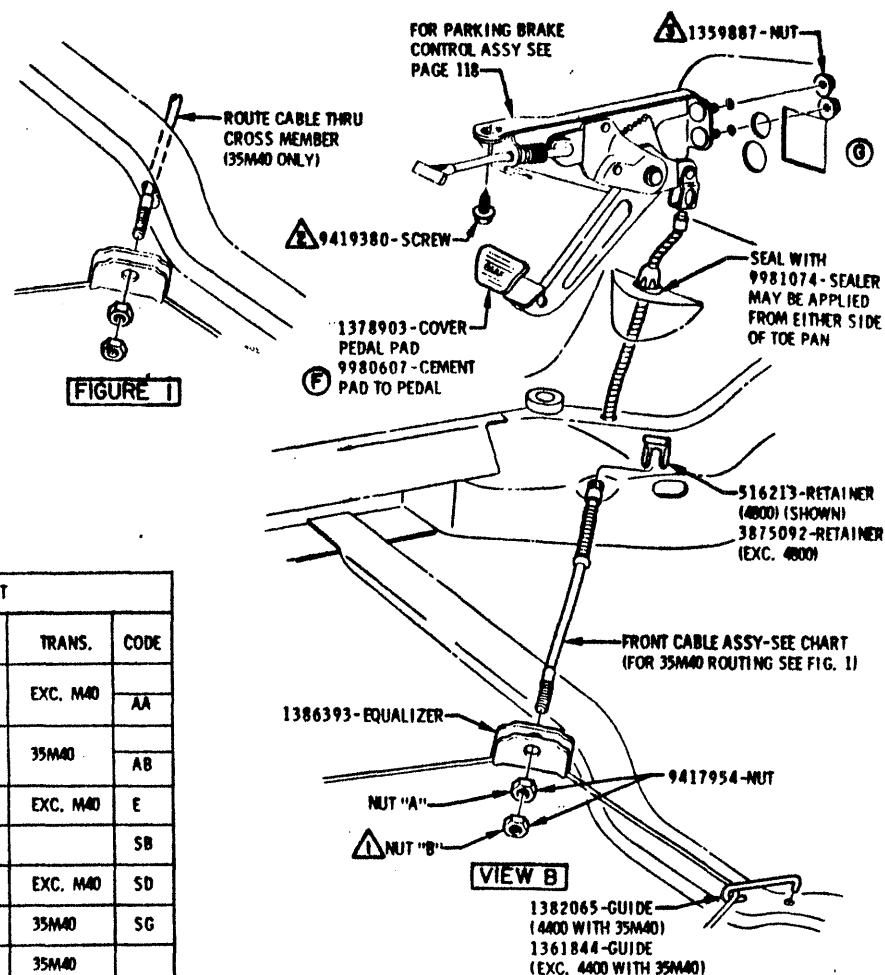
**POWER DISC BRAKES**

[illegible]

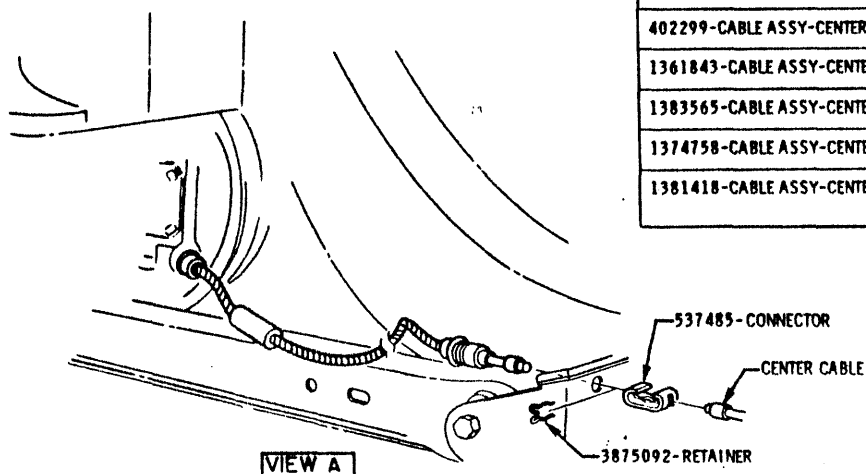





TITLE										POWER BRAKE VACUUM HOSE ROUTING			
DATE	NOVEMBER 16, 1967	FIRST USED	1969	OLDSMOBILE PRODUCT		MANUAL SEC. PAGE		5 116					
DR BY	130YER			INFORMATION MANUAL									
CHECKED	W. J. B. B. B.	REV.	35,150	SERIES		PART NO.		401900					
APPR.	CLAYTON			A									
APPR.	SHAW 11/13/68												

**GENERAL MOTORS CORPORATION  
LANSING — MICHIGAN**



PARKING BRAKE CABLE CHART			
CABLE NUMBER	WHEEL BASE	TRANS.	CODE
401991-CABLE ASSY-FRONT 403226-CABLE ASSY-FRONT (OPT)	ALL	EXC. M40	AA
401990-CABLE ASSY-FRONT 403227-CABLE ASSY-FRONT (OPT)	ALL	35M40	AB
402299-CABLE ASSY-CENTER	112" W/B	EXC. M40	E
1361843-CABLE ASSY-CENTER	116" W/B		SB
1383565-CABLE ASSY-CENTER	121" W/B	EXC. M40	SD
1374758-CABLE ASSY-CENTER	112" W/B	35M40	SG
1381418-CABLE ASSY-CENTER	121" W/B (4800)	35M40	

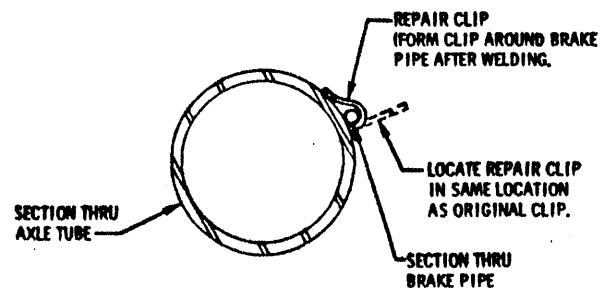


-  36 - 72 LB. IN.  
 72 - 108 LB. IN.  
 84 - 120 LB. IN.

- (E) HOLD THREADED END OF CABLE AND ADJUST NUT "A" TO PRODUCE A PEDAL LOAD OF 65 TO 90 LBS. WHEN PEDAL IS DEPRESSED TO 5 CLICKS.**
- IF OVER 90 LBS.**
- 1. RELEASE PARKING BRAKE.**
  - 2. PULL ON FRONT END OF EITHER REAR CABLE.**
    - MOVEMENT OF CABLE THROUGH THE CONDUIT WITH LESS THAN 10 LB. PULL INDICATES BRAKES ARE NOT DRAGGING AND ADJUSTMENT IS SATISFACTORY.**
    - NO MOVEMENT INDICATES THE BRAKE IS NOT ADJUSTED PROPERLY. ---READJUST BRAKE---**
- HOLD NUT "A" AND TIGHTEN NUT "B" TO SPECIFIED TORQUE.**

[illegible]





REPAIR SHALL BE MADE USING THE NELSON  
STUD-WELDING PROCESS OR EQUIVALENT.  
GREGORY INDUSTRIES, INC. PART NUMBER  
A14 101-501-332 STUD SHALL BE USED FOR REPAIRS.  
ALL REPAIR JOBS MUST 100% INSPECTED FOR  
PROPER BRAKE PIPE RETENTION.

## REAR AXLE BRAKE PIPE CLIP REPAIR PROCEDURE



9781678-SWITCH ASSY

▲ 9416791-NUT & WASHER ASSY.

1383868-PARKING BRAKE  
LEVER ASSY  
1385056-PARKING BRAKE  
LEVER ASSY (OPT)

**PARKING BRAKE SIGNAL LIGHT MUST COME ON  
AS LEVER IS DEPRESSED TO THE FIRST CLICK**

**△ 72 - 96 LB. IN.**

[illegible]